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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,937	05/10/2001	Akira Harada	35.C15506	4055

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EXAMINER

SCHWARTZ, JORDAN MARC

ART UNIT	PAPER NUMBER
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2873

DATE MAILED: 06/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicant(s)

09/851,937

HARADA, AKIRA

Examiner

Jordan M. Schwartz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) 5-50 and 52-58 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION***Claim Rejections - 35 USC § 112***

Claim 1 (and dependent claims 2-4 and 51) is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically, claim 1 is now claiming that the imaging lens system is for imaging from “an object image” i.e. an intermediate image, however, there is nothing in the specification or Figures as originally presented to support an intermediate image being formed by the imaging lens system and therefore the claimed “for imaging an object image” presents prohibited new matter. For purposes of examination it is assumed that the imaging lens system is for “imaging an object onto image taking means” (as opposed to “imaging an object image onto image taking means”).

With further reference to claim 1, applicant is claiming the condition of “ $\beta \geq 0.5$ ” and it is not clear if applicant is claiming that the magnitude of the maximum imaging magnification is ≥ 0.5 or if applicant is claiming that the imaging lens system is forming an erect image with a maximum imaging magnification of ≥ 0.5 and the lack of clarity renders the claim vague and indefinite. Specifically, by convention, a positive beta value means that an erect image is being formed while a negative beta value means that an inverted image is being formed. From what is disclosed in the specification and figures, the

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imaging system would apparently be forming an inverted image which would therefore require the beta value to be negative. It is therefore not clear if applicant meant to claim beta as a positive value i.e. that the system forms an erect image or if applicant meant to claim that the absolute value of beta is ≥ 0.5 (which is the assumed meaning) and the lack of clarity renders the claim vague and indefinite.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4, and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over lizuka patent number 4,437,734 in view of Suzuki patent number 5,898,525.

lizuka discloses the limitations therein including the following: an imaging lens system (column 1, lines 6 re a photographing lens system); for imaging an object onto image taking means (column 1, lines 6-10, column 2, lines 47-62 re photographing an object onto a film plane) comprising a plurality of lenses (Figures 3, 7, 11); a stop (see examples re "diaphragm plane" and column 9, lines 24-32); the imaging system moving the whole or part during focusing for a distance from an object from an infinity side to a near side (column 1, lines 6-10, column 2, lines 47-62); and the imaging system satisfying the condition of $\beta \geq$

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0.5 (column 2, lines 32-35, column 8, line 63 to column 9, line 8. The optical device of Iizuka will inherently satisfy the condition of claim 4, this being reasonably based upon the large range claimed (greater than 1), based upon what is disclosed in the embodiments, and based upon the similarity in structure to that of the claimed invention. In reference to claim 51, the imaging lens system of Iizuka will inherently be housed within a housing to hold the photographic lens system.

Iizuka discloses as is set forth above including the lens system as having a varying magnification (Tables) but does not disclose the lens system comprising a diffractive surface. Suzuki teaches that in a lens system having a varying magnification (abstract and examples) that the lens system can further comprise a diffractive surface for the purpose of providing improved imaging performance (column 9, lines 59-63). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the lens system of Iizuka as having a diffractive surface since Suzuki teaches that in a lens system having a varying magnification, that the lens system can further comprise a diffractive surface for the purpose of providing improved imaging performance.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iizuka in view of Suzuki and further in view of Bietry patent number 5,909,322.

Iizuka and Suzuki disclose and teach as is set forth above but do not specifically disclose the diffractive surface as set forth in the equation of claim 3. Bietry teaches that in an optical system having a diffractive surface, the

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diffractive surface can be formed to comply with the equation of claim 3 to provide a diffractive surface that provides the required aberration correction (column 6, lines 20-47). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the diffractive surfaces of Iizuka in view of Suzuki as complying with the condition of claim 3, since Bietry teaches that in an optical system having a diffractive surface, the diffractive surface can be formed to comply with the equation of claim 3 to provide a diffractive surface that provides the required aberration correction.

Response to Arguments

Applicant's arguments with respect to the above rejected claims have been considered but are moot in view of the newly applied grounds of rejection set forth above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jordan M. Schwartz whose telephone number is (571) 272-2337. The examiner can normally be reached on Monday to Friday (8:00-5:30), alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached at (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'J. Schwartz', with a large, stylized loop at the end.

Jordan M. Schwartz
Primary Examiner
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June 24, 2004